We claim:

## 1. A compound of formula (I)

$$R^{1}$$
 $N$ 
 $CR^{3}R^{3}$ 
 $X_{1}$ 
 $X_{2}$ 
 $X_{3}$ 
 $X_{8}$ 
 $X_{10}$ 
 $X_{10}$ 

wherein

each of  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ ,  $X_5$ ,  $X_6$ ,  $X_7$ ,  $X_8$ ,  $X_9$  and  $X_{10}$  is C, CH, or N; provided that each of rings A or B has no more than 2 nitrogen atoms;

E is O or NH;

v is 1, 2, or 3;

R<sup>1</sup> and R<sup>2</sup> are independently selected from hydrogen, C<sub>1</sub>-C<sub>8</sub> alkyl, C<sub>2</sub>-C<sub>8</sub> alkenyl, C<sub>2</sub>-C<sub>8</sub> alkynyl, aryl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, -C<sub>1</sub>-C<sub>10</sub> alkylaryl, heterocyclyl, -C<sub>1</sub>-C<sub>10</sub> alkylheterocyclic, -arylheterocyclyl, -C<sub>3</sub>-C<sub>8</sub> cycloalkylheterocyclyl, -C<sub>1</sub>-C<sub>8</sub> alkylC(O)C<sub>1</sub>-C<sub>8</sub> alkyl, aryl C(O)C<sub>1</sub>-C<sub>8</sub> alkyl-, C<sub>3</sub>-C<sub>8</sub> cycloalkylC(O)(CH<sub>2</sub>)<sub>n</sub>-, -C<sub>2</sub>-C<sub>8</sub> alkylCH(OH)aryl, -C<sub>2</sub>-C<sub>8</sub>alkylCH(OH)cycloalkyl, -C<sub>2</sub>-C<sub>8</sub> alkylCH(OH)heterocyclyl C<sub>2</sub>-C<sub>8</sub> alkylCH(OH)aryl, - $C_1$ - $C_8$  alkylC(O)heterocyclic, - $C_1$ - $C_8$  alkylC(O)aryl, aryloxy $C_1$ - $C_8$  alkyl-, benzhydryl, fused bicyclic, C<sub>1</sub>-C<sub>8</sub> alkylfused bicyclic, phenylC(O)-, phenylC(O) C<sub>1</sub>-C<sub>8</sub> alkyl-, C<sub>1</sub>-C<sub>8</sub>  $alkoxyC_1-C_8\ alkyl-,-CO(O)C_1-C_8 alkyl,\ -SO_2C_1-C_8 alkyl,\ -SO_2C_1-C_{10}\ alkylaryl,\ -SO_2C_1-C_8 alkyl,\ -SO_2C_1-C_8 alkyl$ alkylheterocyclic,  $-C_1-C_8$  alkylcycloalkyl,  $-(CH_2)_nC(O)OR^8$ ,  $-(CH_2)_nC(O)R^8$ , -(CH<sub>2</sub>)<sub>m</sub>C(O)NR<sup>8</sup>R<sup>8</sup>, and -(CH<sub>2</sub>)<sub>m</sub>NSO<sub>2</sub>R<sup>8</sup>; wherein each of the alkyl, alkenyl, cycloalkyl, heterocyclic, and aryl groups are optionally substituted with one to five groups independently selected from halo, C<sub>1</sub>-C<sub>8</sub> haloalkyl, C<sub>1</sub>-C<sub>8</sub> thioalkyl, C<sub>1</sub>-C<sub>8</sub> alkyl, C<sub>2</sub>-C<sub>8</sub> alkenyl, aryl,  $-C_1-C_8$  alkylaryl,  $-C(O)C_1-C_8$  alkyl,  $-CO(O)C_1-C_8$  alkyl,  $-SO_2C_1-C_8$  alkyl,  $-SO_2C_1-C_8$ SO<sub>2</sub>C<sub>1</sub>-C<sub>8</sub> alkylaryl, -SO<sub>2</sub>C<sub>1</sub>-C<sub>8</sub> alkylheterocyclic, -C<sub>1</sub>-C<sub>8</sub> alkylcycloalkyl, - $(CH_2)_nC(O)OR^8$ ,  $-(CH_2)_nC(O)R^8$ ; and wherein  $R^1$  and  $R^2$  may optionally combine with each other, or with 1, or 2 atoms adjacent to the nitrogen atom to form a 4, 5, 6, or 7membered nitrogen-containing heterocycle which nitrogen -containing heterocycle may further have substituents selected from the group consisting of amino, C<sub>1</sub>-C<sub>8</sub> alkyl, C<sub>2</sub>-C<sub>8</sub>

alkenyl, C2-C8 alkynyl, aryl, C1-C8 alkylaryl, -C(O)C1-C8 alkyl, -CO(O)C1-C8 alkyl, halo,

oxo. C<sub>1</sub>-C<sub>8</sub> haloalkyl; and wherein R<sup>1</sup> and R<sup>2</sup> may independently attach to the A ring to form a 4, 5, 6, or 7-member nitrogen-containing bicyclic heterocycle which nitrogencontaining bicyclic heterocycle may further have substituents selected from the group consisting of oxo, amino, -C<sub>1</sub>-C<sub>8</sub> alkyl, -C<sub>2</sub>-C<sub>8</sub> alkenyl, -C<sub>2</sub>-C<sub>8</sub> alkynyl, aryl, -C<sub>1</sub>-C<sub>8</sub> alkylaryl,  $-C(O)C_1-C_8$  alkyl,  $-CO(O)C_1-C_8$  alkyl, halo, and  $C_1-C_8$  haloalkyl; and wherein  $R^1$  and  $R^2$  are not simultaneously hydrogen; and provided that when v is 2, and  $R^3$  and  $R^3$ are both hydrogen or CH<sub>3</sub>, and both A and B rings are phenyl, then the group -NR<sup>1</sup>R<sup>2</sup> is not equal to -NHCH<sub>2</sub>Phenyl; and further provided that when one of R<sup>1</sup> or R<sup>2</sup> is -CH<sub>2</sub>CH<sub>2</sub>optionally substituted phenyl or -CH<sub>2</sub>CH<sub>2</sub>-optionally substituted naphthyl, or -CH<sub>2</sub>CH<sub>2</sub>optionally substituted 5 or 6 member monocyclic heterocyclic aromatic, and v is 1, and both A and B rings are phenyl, then R<sup>6</sup> and R<sup>7</sup> are not simultaneously hydrogen; R<sup>3</sup> and R<sup>3</sup> are each independently selected from hydrogen, C<sub>1</sub>-C<sub>8</sub> alkyl, C<sub>2</sub>-C<sub>8</sub> alkenyl, C<sub>2</sub>-C<sub>8</sub> alkynyl, aryl, -C<sub>1</sub>-C<sub>8</sub> alkylcycloalkyl, and -C<sub>1</sub>-C<sub>8</sub> alkylaryl; R<sup>4</sup> and R<sup>5</sup> are each independently selected from hydrogen, C<sub>1</sub>-C<sub>8</sub> alkyl, C<sub>2</sub>-C<sub>8</sub> alkenyl, -C<sub>2</sub>-C<sub>8</sub> alkynyl, -C<sub>1</sub>-C<sub>8</sub> alkoxyalkyl, C<sub>1</sub>-C<sub>8</sub> thioalkyl, halo, C<sub>1</sub>-C<sub>8</sub> haloalkyl, -C<sub>1</sub>-C<sub>8</sub> alkoxyhaloalkyl, aryl, -C<sub>1</sub>-C<sub>8</sub> alkylaryl, -C(O)C<sub>1</sub>-C<sub>8</sub> alkyl, or -C(O)OC<sub>1</sub>-C<sub>8</sub> alkyl, -C<sub>1</sub>-C<sub>8</sub> alkylamino, -C<sub>1</sub>-C<sub>8</sub> alkylcycloalkyl, -(CH<sub>2</sub>)<sub>m</sub>C(O)C<sub>1</sub>-C<sub>8</sub> alkyl, and (CH<sub>2</sub>)<sub>n</sub>NR<sup>8</sup>R<sup>8</sup>, wherein each R<sup>4</sup> or R<sup>5</sup> is attached to its respective ring only at carbon atoms, and wherein y is 0, 1, 2, or 3; and wherein z is 0, 1, 2, or 3; R<sup>6</sup> and R<sup>7</sup> are each independently selected from hydrogen, C<sub>1</sub>-C<sub>8</sub> alkyl, C<sub>2</sub>-C<sub>8</sub> alkenyl, C<sub>2</sub>-C<sub>8</sub> alkynyl, -C(O)C<sub>1</sub>-C<sub>8</sub> alkyl, hydroxy, C<sub>1</sub>-C<sub>8</sub> alkoxy, -SO<sub>2</sub>C<sub>1</sub>-C<sub>8</sub> alkyl, SO<sub>2</sub>C<sub>1</sub>-C<sub>8</sub> alkylaryl, -SO<sub>2</sub>C<sub>1</sub>-C<sub>8</sub> alkylheterocyclic, aryl, -C<sub>1</sub>-C<sub>8</sub> alkylaryl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, -C<sub>1</sub>-C<sub>6</sub> alkylcycloalkyl, -(CH<sub>2</sub>)<sub>n</sub>C(O)R<sup>8</sup>, -(CH<sub>2</sub>)<sub>m</sub>C(O)NR<sup>8</sup>R<sup>8</sup>, and -(CH<sub>2</sub>)<sub>m</sub>NSO<sub>2</sub>R<sup>8</sup>; wherein each of the alkyl, alkenyl, and aryl groups are optionally substituted with one to five groups independently selected from C<sub>1</sub>-C<sub>8</sub> alkyl, C<sub>2</sub>-C<sub>8</sub> alkenyl, aryl, and C<sub>1</sub>-C<sub>8</sub> alkylaryl; and wherein R<sup>6</sup> and R<sup>7</sup> may independently combine with each other, and with the nitrogen atom to which they are attached or with 1, or 2 atoms adjacent to the nitrogen atom to form a 4, 5, 6, or 7-membered nitrogen containing heterocycle which nitrogen containing

heterocycle may optionally have substituents selected from the group consisting of oxo,

 $C_1$ - $C_8$  alkyl,  $C_2$ - $C_8$  alkenyl,  $C_2$ - $C_8$  alkynyl, aryl,  $-C_1$ - $C_8$  alkylaryl,  $-C(O)C_1$ - $C_8$  alkyl,  $-C_1$ - $C_1$ - $C_2$ - $C_2$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_2$ - $C_3$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_3$ - $C_2$ - $C_3$ - $C_3$ - $C_3$ - $C_3$ - $C_3$ - $C_4$ - $C_3$ - $C_4$ - $C_3$ - $C_4$ - $C_5$ 

PCT/US2003/026300

 $CO(O)C_1$ - $C_8$  alkyl, hydroxy,  $C_1$ - $C_8$  alkoxy, - $C_1$ - $C_8$  alkylamine, amino, halo, and haloalkyl;

WO 2004/026305

 $R^8$  is hydrogen,  $C_1$ - $C_8$  alkyl,  $C_2$ - $C_8$  alkenyl,  $C_1$ - $C_8$  alkylaryl, - $C(O)C_1$ - $C_8$  alkyl, or - $C(O)OC_1$ - $C_8$  alkyl; and wherein n is 0, 1, 2, 3 or 4 and m is 1, 2, or 3; or a pharmaceutically acceptable salt, solvate, enantiomer, racemate, diastereomer or mixture of diastereomers thereof.

- 2. The compound according to claim 1 wherein the A-ring is selected from the group consisting of phenyl, pyridine, pyrimidine, pyrazine, and pyridazine.
- 3. A compound according to Claim 1 wherein the B-ring is selected from the group consisting of phenyl, pyridine, pyrimidine, pyrazine, and pyridazine.
- 4. A compound according to Claim 1 wherein the A-ring is phenyl and the B ring is pyridinyl.
- 5. A compound according to Claim 1 wherein the A ring is phenyl and the B ring is pyrazinyl.
- 6. A compound according to Claim 1 wherein the A-ring is pyridinyl and the B-ring is phenyl.
- 7. A compound according to Claim 1 wherein both rings A and B are pyridinyl.
  - 8. A compound according to Claim 1 wherein both rings A and B are phenyl.
- 9. A compound according to any one of Claims 1 to 8 wherein E is an oxygen atom.
- 10. A compound according to Claim 1 wherein y is 0, 1, or 2, and R<sup>4</sup> is independently selected from the group consisting of hydrogen, fluoro, chloro, bromo.

WO 2004/026305 PCT/US2003/026300

methoxy, ethoxy, methyl, ethyl, isopropyl, trifluoromethyl, trifluoromethoxy, phenyl, and benzyl.

- 11. A compound according to Claim 1 wherein z is 0, 1, or 2, and R<sup>5</sup> is independently selected from the group consisting of hydrogen, fluoro, chloro, bromo, methoxy, ethoxy, methyl, ethyl, isopropyl, trifluoromethyl, trifluoromethoxy, phenyl, and benzyl.
- 12. A compound according to Claim 1 wherein R<sup>1</sup> and R<sup>2</sup> are each independently selected from the group consisting of hydrogen, methyl, ethyl, propyl, isopropyl, phenyl,

$$(CH_2)_n$$

and wherein n is 1, 2, or 3.

13. The compound according to any one of Claims 1 to 12 wherein  $R^6$  and  $R^7$  are each independently selected from the group consisting of hydrogen, methyl, ethyl, propyl, isopropyl, phenyl, provided that when one of  $R^1$  or  $R^2$  is  $-CH_2CH_2$ -optionally substituted phenyl or  $-CH_2CH_2$ -optionally substituted naphthyl, or  $-CH_2CH_2$ -optionally substituted 5 or 6 member monocyclic heterocyclic aromatic, and v is 1, and the B ring is phenyl, then  $R^6$  and  $R^7$  are not simultaneously hydrogen.

- 14. A compound according to any one of Claims 1 to 12 wherein E is an oxygen atom,  $R^6$  and  $R^7$  are each hydrogen provided that  $R^1$  and  $R^2$  are not simultaneously hydrogen and further provided that when one of  $R^1$  or  $R^2$  is -CH<sub>2</sub>CH<sub>2</sub>-optionally substituted phenyl or -CH<sub>2</sub>CH<sub>2</sub>-optionally substituted naphthyl, or -CH<sub>2</sub>CH<sub>2</sub>-optionally substituted 5 or 6 member monocyclic heterocyclic aromatic, and v is 1, the B ring is not phenyl.
  - 15. A compound according to any one of Claims 1 to 12 wherein v is 1 or 2.
  - 16. A compound according to any one of Claims 1 to 12 wherein v is 1.
- 17. A compound according to any one of Claims 1 to 12 wherein vis 2, m is 1, n is 1, y is 0 or 1 and z is 0 or 1.
- 18. A compound selected from the group consisting of: 6-{4-[(3-Methyl-butylamino)-methyl]-phenoxy}-nicotinamide

5-{2-Fluoro-4-[(3-methyl-butylamino)-methyl]-phenoxy}-pyrazine-2-carboxamide

5-(2-Methoxy-4-pentylaminomethyl-phenoxy)-pyrazine-2-carboxamide

6-(2-Fluoro-4-{[2-(tetrahydro-pyran-4-yl)-ethylamino]-methyl}-phenoxy)-nicotinamide

$$\bigcup_{N \to \infty} \bigcup_{N \to \infty} \bigcup_{N \to \infty} NH_2$$

6-(2,3-Difluoro-4-pentylaminomethyl-phenoxy)-nicotinamide

5-(4-{[2-(4-Fluoro-phenyl)-ethylamino]-methyl}-2-methoxy-phenoxy)-pyrazine-2-carboxamide

$$\begin{array}{c} \text{F} \\ \\ \text{N} \\ \\ \text{O} \\ \text{CH}_3 \end{array}$$

5-{4-[(4,4-Dimethyl-pentylamino)-methyl]-2-methoxy-phenoxy}-pyrazine-2-carboxamide

$$H_3C \xrightarrow[N_3]{N} N \xrightarrow[N_3]{N} NH_2$$

5-(2-Methoxy-4-{[2-(tetrahydro-pyran-4-yl)-ethylamino]-methyl}-phenoxy)-pyrazine-2-carboxamide

5-{4-[(3,3-Dimethyl-butylamino)-methyl]-2-fluoro-phenoxy}-pyrazine-2-carboxamide

5-(2-Fluoro-4-{[2-(tetrahydro-pyran-4-yl)-ethylamino]-methyl}-phenoxy)-pyrazine-2-carboxamide

$$\begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array}$$

6-{2-Methyl-4-[(3-methyl-butylamino)-methyl]-phenoxy}-nicotinamide; methanesulfonic acid salt

5-(2-Methyl-4-{[2-(tetrahydro-pyran-4-yl)-ethylamino]-methyl}-phenoxy)-pyrazine-2-carboxamide

$$\bigcap_{N \to \infty} \bigcap_{CH_3} \bigcap_{N \to \infty} \bigcap_{NH_2}$$

6-{4-[(3,3-Dimethyl-butylamino)-methyl]-2-fluoro-6-methoxy-phenoxy}-nicotinamide

5-(2-Fluoro-4-pentylaminomethyl-phenoxy)-pyrazine-2-carboxamide

3-Chloro-4-{4-[(3,3-dimethyl-butylamino)-methyl]-phenoxy}-benzamide

$$\begin{array}{c} H_3C \\ \\ H_3C \\ \\ \end{array}$$

6-(4-{[2-(Tetrahydro-pyran-4-yl)-ethylamino]-methyl}-phenoxy)-nicotinamide

6-{4-[2-(3,3-Dimethyl-butylamino)-ethyl]-2,6-difluoro-phenoxy}-nicotinamide

$$H_3C$$
 $H_3C$ 
 $CH_3$ 
 $H_3C$ 
 $CH_3$ 
 $H_3C$ 
 $CH_3$ 
 $H_3C$ 
 $CH_3$ 
 $H_3C$ 
 $CH_3$ 
 $H_3C$ 
 $CH_3$ 
 $H_3C$ 
 $CH_3$ 

6-{2-Chloro-4-[(3-methyl-butylamino)-methyl]-phenoxy}-nicotinamide

3,5-Difluoro-4-{4-[(3-methyl-butylamino)-methyl]-phenoxy}-benzamide

6-{2,3,6-Trifluoro-4-[(3-methyl-butylamino)-methyl]-phenoxy}-nicotinamide

$$H_3C$$
 $H_3$ 
 $H_3C$ 
 $H_3$ 
 $H_$ 

6-{2,6-Difluoro-4-[(3-methyl-butylamino)-methyl]-phenoxy}-nicotinamide

3-Fluoro-4-{4-[(3-methyl-butylamino)-methyl]-phenoxy}-benzamide

and a pharmaceutically acceptable salt, or solvate thereof.

19. The compound 6-{4-[(3-Methyl-butylamino)-methyl]-phenoxy}-nicotinamide

$$\mathsf{H_3C} \overset{\mathsf{CH_3}}{\longleftrightarrow} \mathsf{N} \overset{\mathsf{O}}{\longleftrightarrow} \mathsf{NH_2}$$

or a pharmaceutically acceptable salt, or solvate thereof.

20. The hydrochloric acid salt of the compound 6-{4-[(3-Methyl-butylamino)-methyl]-phenoxy}-nicotinamide

21. The compound 5-(4-{[2-(4-Fluoro-phenyl)-ethylamino]-methyl}-2-methoxy-phenoxy)-pyrazine-2-carboxamide

or a pharmaceutically acceptable salt, or solvate thereof.

22. The compound 5-(2-Methoxy-4-pentylaminomethyl-phenoxy)-pyrazine-2-carboxylic acid amide

or a pharmaceutically acceptable salt, or solvate thereof.

23. The compound 5-(2-Methoxy-4-{[2-(tetrahydro-pyran-4-yl)-ethylamino]-methyl}-phenoxy)-pyrazine-2-carboxamide

or a pharmaceutically acceptable salt, or solvate thereof.

24. The compound 6-(2-Fluoro-4-{[2-(tetrahydro-pyran-4-yl)-ethylamino]-methyl}-phenoxy)-nicotinamide; methanesulfonic acid salt

$$N_{3}C-\frac{1}{9}$$

- 25. A compound according to any one of Claims 1 to 18 wherein the pharmaceutically acceptable salt is the hydrochloric acid salt, the methanesulfonic acid salt, hydrobromide salt, the bisulfate salt or tartaric acid salt.
- 26. A pharmaceutical composition comprising a therapeutically effective amount of a compound according to any one of Claims 1 to 24 in association with a carrier, diluent and/or excipient.
- 27. A method for blocking a mu, kappa, delta or receptor combination (heterodimer) thereof in mammals comprising administering to a mammal requiring blocking of a mu, kappa, delta or receptor combination (heterodimer) thereof, a receptor blocking dose of a compound according to any one of Claims 1 to 24, or a pharmaceutically acceptable salt, enantiomer, racemate, mixture of diastereomers, or solvate thereof.

28. A method of treating or preventing obesity and Related Diseases comprising administering a therapeutically effective amount of a compound of formula II wherein formula II is represented by the structure

$$R^{1'}$$
 $N$ 
 $(CR^{3a}R^{3b})$ 
 $X_{5'}$ 
 $X_{4'}$ 
 $X_{7'}$ 
 $X_{8'}$ 
 $X_{10'}$ 
 $X_{9'}$ 
 $X_{10'}$ 
 $X_{10'}$ 
 $X_{10'}$ 
 $X_{10'}$ 

wherein

each of  $X_{1'}$ ,  $X_{2'}$ ,  $X_{3'}$ ,  $X_{4'}$ ,  $X_{5'}$ ,  $X_{6'}$ ,  $X_{7'}$ ,  $X_{8'}$ ,  $X_{9'}$  and  $X_{10'}$  is C, CH, or N; provided that each of rings A' or B' has no more than 2 nitrogen atoms;

E' is O or NH;

v is 0, 1, 2 or 3;

 $R^{1'}$  and  $R^{2'}$  are independently selected from hydrogen,  $C_1$ - $C_8$  alkyl,  $C_2$ - $C_8$  alkenyl,  $C_2$ - $C_8$ alkynyl, aryl,  $C_3$ - $C_8$  cycloalkyl,  $-C_1$ - $C_{10}$  alkylaryl, heterocyclyl,  $-C_1$ - $C_{10}$  alkylheterocyclic, -arylheterocyclyl, -C<sub>3</sub>-C<sub>8</sub> cycloalkylheterocyclyl, -C<sub>1</sub>-C<sub>8</sub> alkylC(O)C<sub>1</sub>-C<sub>8</sub> alkyl, aryl  $C(O)C_1-C_8$  alkyl-,  $C_3-C_8$  cycloalkyl $C(O)(CH_2)_n$ -,  $-C_2-C_8$  alkylCH(OH)aryl,  $-C_2-C_8$  alkyl-,  $-C_3-C_8$  alkyl-, C<sub>8</sub>alkylCH(OH)cycloalkyl, -C<sub>2</sub>-C<sub>8</sub> alkylCH(OH)heterocyclyl C<sub>2</sub>-C<sub>8</sub> alkylCH(OH)aryl, -C<sub>1</sub>-C<sub>8</sub> alkylC(O)heterocyclic, -C<sub>1</sub>-C<sub>8</sub> alkylC(O)aryl, aryloxyC<sub>1</sub>-C<sub>8</sub> alkyl-, benzhydryl, fused bicyclic,  $C_1$ - $C_8$  alkylfused bicyclic, phenylC(O)-, p  $alkoxyC_1-C_8\ alkyl-,-CO(O)C_1-C_8alkyl,\ -SO_2C_1-C_8alkyl,\ -SO_2C_1-C_{10}\ alkylaryl,\ -SO_2C_1-C_8alkyl,\ -SO_2C_1-C_8$ alkylheterocyclic,  $-C_1-C_8$  alkylcycloalkyl,  $-(CH_2)_nC(O)OR^8$ ,  $-(CH_2)_nC(O)R^8$ , -(CH<sub>2</sub>)<sub>m</sub>C(O)NR<sup>8</sup>R<sup>8</sup>, and -(CH<sub>2</sub>)<sub>m</sub>NSO<sub>2</sub>R<sup>8</sup>; wherein each of the alkyl, alkenyl, cycloalkyl, heterocyclic, and aryl groups are optionally substituted with one to five groups independently selected from halo, C1-C8 haloalkyl, C1-C8 thioalkyl, C1-C8 alkyl, C2-C8 alkenyl, aryl, - $C_1$ - $C_8$  alkylaryl, - $C(O)C_1$ - $C_8$  alkyl, - $CO(O)C_1$ - $C_8$  alkyl, - $SO_2C_1$ - $C_8$  alkyl, -SO<sub>2</sub>C<sub>1</sub>-C<sub>8</sub> alkylaryl, -SO<sub>2</sub>C<sub>1</sub>-C<sub>8</sub> alkylheterocyclic, -C<sub>1</sub>-C<sub>8</sub> alkylcycloalkyl, -(CH<sub>2</sub>)<sub>n</sub>C(O)OR<sup>8</sup>, -(CH<sub>2</sub>)<sub>n</sub>C(O)R<sup>8</sup>; and wherein R<sup>1</sup> and R<sup>2</sup> may optionally combine with each other, or with 1, or 2 atoms adjacent to the nitrogen atom to form a 4, 5, 6, or 7membered nitrogen-containing heterocycle which nitrogen -containing heterocycle may further have substituents selected from the group consisting of amino, C1-C8 alkyl, C2-C8

alkenyl,  $C_2$ - $C_8$  alkynyl, aryl,  $C_1$ - $C_8$  alkylaryl, - $C(O)C_1$ - $C_8$  alkyl, - $CO(O)C_1$ - $C_8$  alkyl, halo, oxo,  $C_1$ - $C_8$  haloalkyl; and wherein  $R^1$ ' and  $R^2$ ' may independently attach to the A' ring to form a 4, 5, 6, or 7-member nitrogen-containing bicyclic heterocycle which nitrogen-containing bicyclic heterocycle may further have substituents selected from the group consisting of oxo, amino, - $C_1$ - $C_8$  alkyl, - $C_2$ - $C_8$  alkenyl, - $C_2$ - $C_8$  alkynyl, aryl, - $C_1$ - $C_8$  alkylaryl, - $C(O)C_1$ - $C_8$  alkyl, - $CO(O)C_1$ - $C_8$  alkyl, halo, and  $C_1$ - $C_8$  haloalkyl; provided that  $R^1$ ' and  $R^2$ ' are not simultaneously hydrogen; and provided that when V is 2, and  $R^{3a}$  and  $R^{3b}$  are both hydrogen or  $CH_3$ , and both A' and B' rings are phenyl, then the group -  $NR^{1}R^{2}$ ' is not equal to - $NHCH_2$ Phenyl; and further provided that when one of  $R^{1}$ ' or  $R^{2}$ ' is - $CH_2$ -optionally substituted phenyl or - $CH_2CH_2$ -optionally substituted naphthyl, or - $CH_2CH_2$ -optionally substituted 5 or 6 member monocyclic heterocyclic aromatic, and V is 1, and both A' and B' rings are phenyl, then  $R^{6}$ ' and  $R^{7}$ ' are not simultaneously hydrogen;

 $R^{3a}$  and  $R^{3b}$  are each independently selected from hydrogen,  $C_1$ - $C_8$  alkyl,  $C_2$ - $C_8$  alkenyl,  $C_2$ - $C_8$  alkyloyl, aryl, aryl, aryl, and - $C_1$ - $C_8$  alkylaryl;  $R^{4'}$  and  $R^{5'}$  are each independently selected from hydrogen,  $C_1$ - $C_8$  alkyl,  $C_2$ - $C_8$  alkenyl, - $C_2$ - $C_8$  alkynyl, - $C_1$ - $C_8$  alkoxyalkyl,  $C_1$ - $C_8$  thioalkyl, halo,  $C_1$ - $C_8$  haloalkyl, - $C_1$ - $C_8$  alkoxyhaloalkyl, aryl, - $C_1$ - $C_8$  alkylaryl, - $C(O)C_1$ - $C_8$  alkyl, or - $C(O)OC_1$ - $C_8$  alkyl, - $C_1$ - $C_8$  alkylamino, - $C_1$ - $C_8$  alkylcycloalkyl, - $(CH_2)_mC(O)C_1$ - $C_8$  alkyl, and - $(CH_2)_nNR^8R^8$ , wherein each  $R^{4'}$  and  $R^{5'}$  is attached to its respective ring only at carbon atoms, and wherein y is 0, 1, 2, or 3; and wherein z is 0, 1, 2, or 3;

 $R^{6'}$  and  $R^{7'}$  are each independently selected from hydrogen,  $C_1$ - $C_8$  alkyl,  $C_2$ - $C_8$  alkenyl,  $C_2$ - $C_8$  alkynyl,  $-C(O)C_1$ - $C_8$  alkyl, hydroxy,  $C_1$ - $C_8$  alkoxy,  $-SO_2C_1$ - $C_8$  alkyl,  $SO_2C_1$ - $C_8$  alkylaryl,  $-SO_2C_1$ - $-S_8$  alkylaryl, and  $-SO_2C_1$ - $-S_8$  alkylaryl, and  $-SO_2C_1$ - $-S_8$  alkylaryl, and aryl groups are optionally substituted with one to five groups independently selected from  $-S_8$  alkylaryl,  $-S_8$  alkenyl, aryl, and  $-S_8$  alkylaryl; and wherein  $-S_8$  and  $-S_8$  alkylaryl combine together, and with the nitrogen atom to which they are attached or with 1, or 2 atoms adjacent to the nitrogen atom to form a 4, 5, 6, or 7-membered nitrogen containing heterocycle which nitrogen containing heterocycle may further have substituents selected from the group consisting of  $-S_8$  alkyl,  $-S_8$ - $-S_8$ 

2. 6

alkenyl,  $C_2$ - $C_8$  alkynyl, phenyl,  $-C_1$ - $C_8$  alkylaryl,  $-C(O)C_1$ - $C_8$  alkyl,  $-CO(O)C_1$ - $C_8$  alkyl, hydroxy,  $-C_1$ - $C_8$  alkoxy, halo, and haloalkyl;  $R^8$  is hydrogen,  $C_1$ - $C_8$  alkyl,  $C_2$ - $C_8$  alkenyl,  $C_1$ - $C_8$  alkylaryl,  $-C(O)C_1$ - $C_8$  alkyl, or  $-C(O)OC_1$ - $C_8$  alkyl; wherein n is 0, 1, 2, 3 or 4 and wherein m is 1, 2 or 3; or a pharmaceutically acceptable salt, solvate, enantiomer, racemate, diastereomers or mixtures thereof.

- 29. A method according to Claim 28 wherein the Related Diseases is selected from the group consisting of diabetes, diabetic complications, diabetic retinopathy, atherosclerosis, hyperlipidemia, hypertriglycemia, hyperglycemia, and hyperlipoproteinemia.
- 30. A method of treating and/or preventing diseases related to obesity including irritable bowel syndrome, nausea, vomiting, obesity-related depression, obesity-related anxiety, smoking and alcohol addiction, sexual dysfunction, substance abuse, drug overdose, addictive behavior disorders, compulsive behaviors and stroke, comprising administering a therapeutically effective amount of a compound of formula I or II.
- 31. Use of a compound of formula I according to any one of Claims 1 to 24 or a compound of formula II according to Claim 28 in the manufacture of a medicament for the treatment and/or amelioration of the symptoms associated with obesity and Related Diseases.
- 32. A method of treating and/or preventing obesity and Related Diseases comprising administering a therapeutically effective amount of a compound of formula I or II to a patient in need thereof.
- 33. A method of suppressing appetite in a patient in need thereof, comprising administering a therapeutically effective amount of a compound of formula I or II.

WO 2004/026305 PCT/US2003/026300

552

- 34. A method of effecting weight loss in an obese patient comprising administering an effective amount of a compound of formula I or pharmaceutically acceptable salt, solvate, racemate or enantiomer thereof.
- 35. Use of a compound according to Claim 18 for the treatment of obesity comprising administering an effective dose of said compound to a person in need thereof.
- 36. Use of a compound according to Claim 18 for the treatment of weight loss comprising administering an effective dose of said compound to a person in need thereof.
- 37. Use of a compound according to Claim 19 or 20 or 21 or 22 or 23 or 24 for the treatment of obesity comprising administering an effective dose of said compound to a person in need thereof.
- 38. A pharmaceutical composition for the treatment and/or amelioration of the symptoms associated with obesity and Related Diseases, containing as an active ingredient a compound of formula I according to any one of Claims 1 to 24 or a compound of formula II according to Claim 28.